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**UNITED STATES DISTRICT COURT**  
**FOR THE DISTRICT OF OREGON**  
**EUGENE DIVISION**

**CASCADIA WILDLANDS, THE  
CENTER FOR BIOLOGICAL  
DIVERSITY, and AUDUBON SOCIETY  
OF PORTLAND,**

Plaintiffs,

v.

**SCOTT TIMBER CO., ROSEBURG  
RESOURCES CO., and RLC  
INDUSTRIES CO.,**

Defendants.

Case No.: 6:16-CV-01710-AA

**PLAINTIFFS' TRIAL BRIEF**

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## I. INTRODUCTION

The vast and rich old-growth forests that once blanketed the Pacific Northwest are now almost entirely gone. Ex. 13<sup>1</sup> (USFWS 2009) at 32 (noting that at least 82 percent of the mature forests that once existed in western Oregon and Washington have been logged). As a direct result of our extreme overuse of this resource, the wildlife that depend on old complex forests, such as the marbled murrelet, are threatened with extinction. Ex. 16 (57 Fed. Reg. 45,328) at 1 (listing marbled murrelets as a threatened species, explaining, “[t]he marbled murrelet is threatened by the loss and modification of nesting habitat (older forests) primarily due to commercial timber harvesting”).

When the U.S. Fish and Wildlife Service (“USFWS”) listed marbled murrelets as a threatened species in 1992, it stated, “[t]he principal factor affecting the marbled murrelet in [Oregon, Washington, and California], and the main cause of population decline has been the loss of older forests and associated nest sites.” Ex. 16 at 3; Ex. 13 at 32 (“Extensive harvest of late-successional and old-growth forest was the primary reason for listing the murrelet as threatened”). More recently, USFWS confirmed that “the primary threats to the species’ persistence continue” and murrelets “continue[] to be subject to a broad range of threats, such as nesting habitat loss, habitat fragmentation, and predation.” Ex. 17 (75 Fed. Reg. 3424) at 1.

Plaintiffs bring this case under the citizen-suit provision of the Endangered Species Act (“ESA”), 16 U.S.C. §1540(g), to prevent Defendants from causing even further irreparable harm to an already-imperiled species by clearcutting yet another stand of occupied mature forest habitat. Specifically, Plaintiffs seek an injunction against the “Benson Snake” logging operation, in which Defendants will clearcut 49 acres of the Benson Ridge parcel in the Oregon Coast

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<sup>1</sup> Exhibit numbers reflect those assigned by the Parties in their pre-trial disclosures.

Range. At trial, Plaintiffs will prove: (1) that the southern portion of the Benson Ridge parcel is continuous suitable marbled murrelet habitat, (2) that this block of continuous suitable habitat is occupied by marbled murrelets and used for breeding purposes, and (3) that clearcutting 49 acres in the middle of this occupied site will harm, harass, or otherwise “take” marbled murrelets.

The State of Oregon sold the Benson Ridge parcel to Defendants in 2014 precisely because this Court enjoined the State from logging in occupied marbled murrelet habitat. *Cascadia Wildlands v. Kitzhaber*, No. 3:12-cv-00961-AA (Dkt. No. 71), 2012 WL 5914255 (D. Or. Nov. 19, 2012) (granting Plaintiffs’ motion for preliminary injunction); Ex. 19 at 2 (describing “recent restricted timber harvests” as the impetus for the sale of the parcel). The evidence in this case will show that, before the parcel was sold, a volunteer wildlife survey organization called Coast Range Forest Watch (“CRFW”) conducted surveys for marbled murrelets in the Benson Ridge parcel and found that the block of continuous suitable habitat in the southern portion of the parcel was occupied by marbled murrelets. Ex. 22 (CRFW survey data). CRFW detected sub-canopy murrelet behaviors, which are indicative of occupancy, within the area now proposed for clearcutting, and CRFW provided their survey results to Defendants. *Id.*; Ex. 25 at 4-7 (letter from CRFW).

The evidence will also show that, before purchasing the parcel, Defendants were notified that the parcel contained suitable habitat for murrelets and that, according to the USFWS, “[s]tands that have been surveyed and shown to be occupied cannot be harvested” and “the boundary of a site known to be occupied by murrelets extends to the end of the suitable habitat.” Ex. 20 (Benson Ridge Timber Appraisal) at 10, 18-21. Defendants then purchased the Benson Ridge parcel at a price that assumed a “90 percent discount... based on the high probability that these stands are occupied” by murrelets and therefore cannot be logged. *Id.* at 25.

After purchasing the parcel for a small fraction of the appraised value, Defendants commissioned Western EcoSystems Technologies, Inc. (“WEST”) to conduct two years of surveys for marbled murrelets. WEST defined the “Benson South Survey Area” as the continuous suitable habitat in the southern portion of the property, along with the continuous suitable habitat within a quarter-mile of the property boundaries. Exhibit 104 (map of the Benson South Survey Area); Proposed Pretrial Order, Dkt. No. 89 at 16-17. WEST’s surveys in the Benson South Survey Area resulted in nearly 200 detections of marbled murrelets, including at least 25 sub-canopy detections that are indicative of occupancy. Ex. 30 (WEST survey data); Proposed Pre-Trial Order, Dkt. No. 89 at 18-20 (stipulations regarding WEST’s survey results).

Under the widely-accepted survey protocol for marbled murrelets, a single sub-canopy detection classifies the entire contiguous forest stand as “occupied.” Ex. 11 (PSG Protocol) at 27 (“An occupied site is a site where at least one of the following subcanopy behaviors or conditions occurs...”); *Marbled Murrelet v. Pac. Lumber Co.*, 880 F. Supp. 1343, 1353 (N.D. Cal. 1995) (“Because marbled murrelets are so difficult to detect, and because studies have shown that ‘occupied behavior’ is associated with probable nesting, a single observation of ‘occupied behavior’ under the PSG Protocol is enough to classify a suitable stand of marbled murrelet habitat as being ‘occupied’”). Despite overwhelming evidence that the area is occupied by murrelets, Defendants now plan to clearcut 49 acres in the middle of the occupied site.

Plaintiffs’ case is supported by the PSG Protocol, which is the widely-accepted scientific protocol for conducting surveys for marbled murrelets and for identifying forest stands that are occupied by nesting murrelets and important for breeding. Plaintiffs’ case is also supported by the results of murrelet surveys that were conducted in the Benson Ridge parcel by CRFW in 2014 and by WEST in 2015 and 2016. Finally, Plaintiffs’ claim is supported by the testimony of

their expert witnesses who, with the support from a large body of scientific study and literature, will discuss the behaviors and needs of marbled murrelets, the significance of the survey results at Benson Ridge, the scientific basis for the PSG Protocol, and the impacts to murrelets caused by the loss and fragmentation of occupied habitat.

Plaintiffs will demonstrate at trial that clearcutting 49 acres of occupied habitat in the Benson Ridge parcel will harm, harass, or otherwise “take” marbled murrelets. *See Marbled Murrelet*, 880 F. Supp. at 1366 (finding that logging in suitable murrelet habitat, classified as “occupied” under the PSG Protocol, caused both harm and harassment of murrelets under Section 9 of the ESA); *Marbled Murrelet v. Babbitt*, 83 F.3d 1060, 1067–68 (9th Cir. 1996) (affirming *Marbled Murrelet* and holding that plaintiffs had carried their burden of proving “harm” under Section 9 by showing a “probability of the murrelets' nesting in Owl Creek, and that implementation of Pacific Lumber's harvesting plan would likely harm marbled murrelets by impairing their breeding and increasing the likelihood of attack by predators on the adult murrelets as well as the young”).

Plaintiffs respectfully request (1) a declaratory order finding Defendants in violation of Section 9 of the ESA, (2) injunctive relief prohibiting Defendants from implementing the Benson Snake logging operation, and (3) an award of their reasonable costs and fees, including attorneys’ fees and expert witnesses’ fees.

## **II. STATEMENT OF EVIDENCE**

### **A. Plaintiffs have Standing**

This Court has already ruled that the evidence presented by Plaintiffs is sufficient to establish standing. Dkt. No. 90 (Order Denying Defendants’ Motion for Summary Judgment). Consistent with their previous declarations and testimony, Plaintiffs’ standing witnesses Max

Beeken and Rosemary Francis Eatherington will testify at trial to establish that Plaintiffs' continue to have standing in this case. The parties have further stipulated that Mr. Beeken and Ms. Eatherington are members of Cascadia Wildlands, and that the interests at stake in this case are germane to Plaintiffs' organizational purposes. Proposed Pretrial Order, Dkt. No. 89 at 2-3; *see Friends of the Earth, Inc. v. Laidlaw Environmental Serv. Inc.*, 528 US 167, 181 (2000) (setting forth the additional requirements for organizational standing).

### **B. Marbled Murrelets**

The marbled murrelet (hereafter “murrelet”) is a small bird that spends most of its life at sea but nests inland in mature forests. The Parties have stipulated that murrelets are a threatened species under the ESA. Proposed Pretrial Order, Dkt. No. 89 at 3. Through the testimony of their expert witnesses, Plaintiffs will provide the Court with information about murrelets, their behaviors, their habitat needs, past and ongoing threats to the species including from habitat changes, and the significant impacts to murrelets caused specifically by logging in nesting habitat. Plaintiffs will also submit, and have their experts discuss, relevant scientific literature about murrelets, including recent publications by USFWS, the Oregon Department of Fish and Wildlife (“ODFW”), the U.S. Forest Service, and others. *See, e.g.*, Exs. 11 - 15.

For example, a comprehensive report about the biological status of murrelets in Oregon, published by ODFW in 2018, states “[a]t a landscape scale, murrelets use habitats (based on various survey methods and definitions) that are generally associated with large amounts of unfragmented old-growth or mature forests (Burger 2002, Raphael et al. 2002, Meyer and Miller 2002, McShane et al. 2004, Nelson et al. 2006, Burger and Waterhouse 2009, Raphael et al. 2015, Raphael et al. 2016b, Wilk et al. 2016).” Ex. 12 at 29. The report continues:

In general, Marbled Murrelet nest sites are negatively associated with increasing amounts of forest fragmentation (reviewed in Burger 2002, McShane et al. 2004, Nelson et al.

2006). Aspects of landscape pattern and configuration (e.g., adjacent habitat, proximity to human activities, type of edge) are also important due to their influence on edge effects and predator-prey dynamics (see Fragmentation of Habitat below). In southern Oregon, Meyer et al. (2002) found that murrelets were most abundant in unfragmented old-growth forest patches located within a matrix of mature second-growth forest, and Meyer and Miller (2002) found that occupied areas had less fragmented and isolated old-growth forest compared to unoccupied areas. Similarly, in western Oregon, Ripple et al. (2003) found that the proportion of old-growth forest was a key predictor of murrelet nest sites, and that edge-related habitat variables (i.e., edge-perimeter density, nest-patch perimeter, high-contrast edge at nest patches) were lower at murrelet nest sites than random sites. These findings are consistent with more recent results reported in Raphael et al. (2016b), that nesting habitat cohesion (the inverse of habitat fragmentation) was a strong predictor of murrelet abundance and trends along the Pacific Northwest Coast, including Oregon. (ODFW 2018).

*Id.* at 30. Similarly, USFWS published a comprehensive report on marbled murrelets in 2009, and stated, “[m]urrelet habitat use during the breeding season is *positively associated* with the presence and abundance of mature and old-growth forests, *large core areas of old- growth, low amounts of edge habitat, reduced habitat fragmentation*, proximity to the marine environment, and forests that are increasing in stand age and height.” Ex. 13 at 70. The report explained:

In addition to direct habitat removal, forest management practices can fragment murrelet habitat; this reduces the amount and heterogeneous nature of the habitat, reduces the forest patch sizes, reduces the amount of interior or core habitat, increases the amount of forest edge, isolates remaining habitat patches, and creates “sink” habitats (McShane et al. 2004). There are no estimates available for the amount of suitable habitat that has been fragmented or degraded since 1992. However, the ecological consequences of these habitat changes to murrelets can include effects on population viability and size, local or regional extinctions, displacement, fewer nesting attempts, failure to breed, reduced fecundity, reduced nest abundance, lower nest success, increased predation and parasitism rates, crowding in remaining patches, and reductions in adult survival (Raphael et al. 2002).

Ex. 13 at 33. More information about murrelets, their behaviors, their habitat needs, and threats to the species, is provided in the expert reports of Dr. Golightly and Dr. Falxa. Exs 1, 4.<sup>2</sup>

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<sup>2</sup> Defendants object to these expert reports as hearsay. Even if the reports are hearsay under Rules 801 and 802, they can and should be admitted under the residual hearsay exception in Rule 807. Plaintiffs will address this more fully in their response to Defendants’ objections.



### C. The PSG Protocol

The evidence in this case will show that marbled murrelets are elusive, cryptically colored, and their nests are “extremely difficult to find.” Ex. 11 at 25. The first marbled murrelet nest was not found until 1974, making murrelets one of the last birds in all of North America to have its nest discovered. Ex. 4 at 9. When murrelets were first listed as threatened in 1992, only twenty-three nests had ever been located, Ex. 16 at 2, and as of 2002 only about 300 nests had been found. Ex. 11 at 6. This is in large part because murrelets blend well with the surrounding forest environment, and “may only show activity near its nest one time per day, and may do so under low light conditions.” Ex. 16 at 2. Further, murrelets do not build nests, but instead lay their eggs in depressions on large moss-covered branches, so there is no nest structure to observe. Ex. 4 at 7. Because nests themselves cannot reliably be located, the scientific community has developed “a set of behavioral criteria to determine if potential habitat is likely to be occupied by murrelets.” Ex. 11 at 25.

These criteria are set forth in the scientific protocol developed by the Pacific Seabird Group (PSG) titled “*Methods for Surveying Marbled Murrelets in Forests: a Revised Protocol for Land Management and Research.*” Ex. 11. The protocol was last revised in 2003 and is referred to as the “PSG Protocol” or “Evans Mack et al. 2003.” *Id.* The Ninth Circuit has explained, “Federal agencies, research institutions and private industry developed this protocol because the behavior of marbled murrelets makes it difficult for human observers to locate actual murrelet nests.” *Nw. Forest Res. Council v. Pilchuck Audubon Soc’y*, 97 F.3d 1161, 1167 (9th Cir. 1996). Under the PSG Protocol, designation of an “occupied site” does not depend on the discovery of a nest, but on the observation of murrelets exhibiting certain behaviors, typically sub-canopy flights, which strongly indicate that the area is used for breeding. Ex. 11 at 8, 27.

As the PSG Protocol explains, “[a]n occupied site is where murrelets have been observed exhibiting subcanopy behaviors, which are behaviors that occur at or below the forest canopy and that strongly indicate that the site has some importance for breeding.” Ex. 11 at 8. Subcanopy behaviors include flights that are “below, through, into, or out of the forest canopy within or adjacent to potential habitat,” as well as landing, perching, or calling from a stationary position. *Id.* at 25, 27. “These behaviors have been documented at active nest sites and can be observed during an audio-visual survey, providing the rationale to use them as indicators of occupancy.” *Id.* at 25. “Occupied sites include nest sites, but an occupied site also can be used for purposes other than nesting that are essential for the complete life history of the bird.” *Id.* at 27. For example, “the places where birds engage in courtship or other breeding-related activities might not be in the exact same area or stand as a nest, but these areas are just as important as nesting sites for the birds’ life history.” *Id.* at 27-28.

When logging is planned in suitable murrelet habitat, the Protocol requires surveys to be conducted in all contiguous potential habitat within a minimum of one-quarter mile of the project area boundary. Ex. 11 at 11. “Contiguous potential habitat is that which contains no gaps in suitable forest cover wider than 100 m (328 feet).” *Id.* at 8. The contiguous potential habitat in and around a proposed logging area is designated as the “survey area.” *Id.* at 11. A large survey area may be divided into smaller “survey sites” to ensure full coverage and consistent detectability. *Id.* at 12. However, because the survey area is, by definition, a single contiguous block of suitable habitat, the entire survey area is classified as occupied if occupancy is detected at one site within a larger block of contiguous habitat. *Id.* at 28. The Protocol explains:

For example, if a block of continuous potential habitat is divided into three contiguous survey sites, and one of those three sites yields subcanopy detections, the entire survey area is considered occupied, not just that one site, because all the sites form one large piece of continuous habitat.

*Id.* Because marbled murrelets are so difficult to detect, a site is occupied if even a single occupied behavior occurs. *Id.* at 27; *Marbled Murrelet*, 880 F. Supp. at 1353 (“even if only one instance of ‘occupied behavior’ is noted during 300 surveys, a forest will be considered a probable marbled murrelet nest stand”).

#### **D. The Benson Ridge Parcel and the Benson Snake Logging Operation**

The Parties have stipulated to many of the relevant facts pertaining to the Benson Ridge Parcel and the Benson Snake logging operation. Proposed Pretrial Order, Dkt. No. 89 at 13-15, 22-24. The Benson Ridge Tract is approximately 355 acres total and is located roughly five to six miles east and slightly north of the city of Lakeside, Oregon. *Id.* at 13. It was part of the Elliott State Forest but was sold to Defendants in 2014 following this Court’s injunction in *Cascadia Wildlands v. Kitzhaber*. *Id.* at 14-15. Much of the parcel is suitable marbled murrelet habitat, though the habitat in the southern portion of the parcel is separated from the habitat in the northern portion of the parcel by a previously clearcut section (now about 40 years old) in the middle of the parcel. *Id.* at 16; Ex. 105 (age-class map).

In 2016, Defendants submitted a notification to the Oregon Department of Forestry, outlining their intent to clearcut 49 acres in the southern portion of the Benson Ridge parcel. Proposed Pretrial Order, Dkt. No. 89 at 22-23. Defendants intend to implement the Benson Snake logging operation unless the Court determines that it violates Section 9 of the ESA and that Plaintiffs are entitled to an injunction. *Id.* Exhibits 104 and 105 contain maps of the parcel and proposed logging unit.

### **E. The Benson Ridge Parcel is Occupied by Marbled Murrelets**

The evidence will show that the continuous forest in and around the proposed logging unit is occupied by murrelets. To prove this at trial, Plaintiffs will rely on the PSG Protocol, the survey results from CRFW in 2014 and WEST in 2015-2016 (either of which would classify the entire contiguous forest as “occupied” under the PSG Protocol), and the expert testimony of Dr. Golightly and Dr. Falxa.

Plaintiffs will offer the testimony of Max Beeken and Clark McMahon of CRFW, who conducted murrelet surveys in the Benson Ridge parcel in 2014. The results of the CRFW surveys have been submitted as Exhibits 22 (written survey forms), 23 (contemporaneous audio recordings from the May 24, 2014 survey), 24 at 28-29 (maps), and 25 (CRFW communications). Mr. McMahon will testify that, on May 24, 2014, he conducted a survey in the area now proposed for logging and observed two murrelets flying below the canopy. Ex 22 at 19-20; Ex 23K; *also compare* Ex 24 at 28 (map of May 24, 2014 detection) *with* Ex 104 (map of proposed logging unit). CRFW also made at least three other “presence” detections of murrelets in the now-proposed logging unit. Ex. 22 at 10, 12 and 20. These observations all occurred before Defendants had any specific plans for logging or drawn any unit boundaries.

The Parties have stipulated that, to become certified murrelet surveyors, Mr. Beeken and Mr. McMahon have gone through the same formal training and certification as WEST’s surveyors. Proposed Pretrial Order, Dkt. No. 89 at 16, 22; Ex. 26 (CRFW certification documents). Mr. Beeken and Mr. McMahon will also testify about their extensive background and experience with wildlife surveys, including professional experience for companies that, like WEST, are hired to conduct surveys on behalf of private timber companies.

The Parties have stipulated to the results of WEST's surveys from 2015 and 2016, Proposed Pretrial Order, Dkt. No. 89 at 16-22, which documented 191 detections of marbled murrelets, including 25 sub-canopy detections, in the Benson South Survey Area. *Id.* at 18-20. To put this into perspective, *any one* of these 25 sub-canopy detections would classify the entire Benson South Survey Area as occupied under the PSG protocol. WEST's surveys resulted in nearly twice as many detections than were noted in *Marbled Murrelet*, 880 F. Supp. at 1360-61 (finding "approximately 100 detections of marbled murrelets at Owl Creek," including "numerous" occupied detections, and explaining, "there can be only one explanation for the marbled murrelets' continued presence in Owl Creek: the marbled murrelet is using the Owl Creek stand for nesting purposes"). Further, the Benson South Survey Area, at 268.7 acres (Proposed Pretrial Order, Dkt. No. 89 at 16), is significantly smaller than the 440-acre survey area at issue in *Marbled Murrelet*, 880 F. Supp. at 1344.

Thus, when compared with the evidence in *Marbled Murrelet*, the surveys in this case resulted in nearly twice as many detections, including more sub-canopy detections, in an area that is 40 percent smaller. The results of these surveys show what Plaintiffs' experts have described as a "very saturated picture" of marbled murrelet use in the Benson Ridge parcel. Dkt. No. 21-1 (Golightly Decl.) at 14. Plaintiffs' experts will testify that the results of either the CRFW surveys or the WEST surveys should classify the entire Benson South Survey Area as occupied and that, especially when considered together, the results of these surveys present a very consistent and compelling picture of murrelet use at Benson Ridge.

### III. ARGUMENT AND AUTHORITY

#### A. Legal Standard for Liability under the Endangered Species Act

At the time of its enactment, the ESA “represented the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). The stated purposes of the ESA are “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] to provide a program for the conservation of such endangered species and threatened species.” 16 U.S.C. § 1531(b). “The plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost. This is reflected not only in the stated policies of the Act, but in literally every section of the statute.” *Tennessee Valley Auth.*, 437 U.S. at 184. “[E]xamination of the language, history, and structure of the [ESA] indicates beyond doubt that Congress intended endangered species to be afforded the highest of priorities.” *Id.* at 174.

To achieve these objectives, and consistent with this “highest of priorities” of species conservation, Section 9 of the ESA prohibits any person from causing “take” of any endangered species. 16 U.S.C. §§ 1538(a)(1)(B); 50 C.F.R. § 17.21(c)(1). Pursuant to the ESA’s implementing regulations, and as authorized by the express terms of the statute, the “take” prohibition has also been extended to threatened species such as the marbled murrelet. 16 U.S.C. §§ 1538(a)(1)(G) and 1533(d); 50 C.F.R. §§ 17.21(c)(1) and 17.31.

“Take” means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. § 1532(19). “‘Take’ is defined ... in the broadest possible manner to include every conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife.” *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*,

515 U.S. 687, 704 (1995) (*quoting* S. Rep. No. 93-307, p. 7 (1973)). “Take” includes direct as well as indirect harm and need not be purposeful. *Id.* at 704-05. A broad interpretation of “take” reflects “Congress’ intent to provide comprehensive protection for endangered and threatened species.” *Id.* at 699.

Section 9 prohibits the taking of any individual member of a listed species. *Or. Natural Res. Council v. Allen*, 476 F.3d 1033, 1040 (9th Cir. 2007) (“Section 9 of the ESA establishes a blanket prohibition on the taking of any member of a listed endangered species”); *Loggerhead Turtle v. Co. Council of Volusia Co.*, 896 F. Supp. 1170, 1180 (M.D Fla. 1995) (“Any taking and every taking – even of a single individual of the protected species – is prohibited by the Act”); *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 886 F.3d 803, 818 (9th Cir. 2018) (plaintiffs need not show harm to the species as a whole to obtain an injunction under the ESA).

### 1. “Harm”

“Harm” under the ESA includes “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. § 17.3. Habitat modification does not constitute harm unless it “actually kills or injures wildlife.” 50 C.F.R. § 17.3; *Defenders of Wildlife v. Bernal*, 204 F.3d 920, 925 (9th Cir. 2000). However, the phrase “actual injury” does not mean only actual *physical* injury to a listed species. *Marbled Murrelet v. Babbitt*, 83 F.3d at 1065 (“the ordinary understanding of the word ‘harm’ supports an interpretation that does not require an act of direct violence to an animal”). Instead, “actual injury” within the definition of “harm” expressly includes habitat modification that “significantly impair[s] essential behavioral patterns, including breeding, feeding or sheltering.” 50 C.F.R. § 17.3. As the Ninth Circuit has directly stated, “a habitat modification which significantly impairs the breeding and sheltering of

a protected species amounts to ‘harm’ under the ESA.” *Marbled Murrelet v. Babbitt*, 83 F.3d at 1067; *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781, 784 (9th Cir. 1995) (“[Plaintiff] does not seek to enjoin habitat modification alone, but rather, habitat modification that is reasonably certain to injure the Swartz Creek owl pair *by impairing their essential behavioral patterns*. Such a claim satisfies the ‘actual injury’ requirement”) (emphasis added).

Defendants may argue that “actual injury” is a distinct element that must be proven separately from the impairment of behavioral patterns (i.e., that Plaintiffs must show that the impairment of a behavioral pattern will cause death or some additional injury to a murrelet), but this is not the correct legal standard. Rather, the impairment of behavioral patterns is itself an “actual injury” that is proscribed by the ESA. *Marbled Murrelet v. Babbitt*, 83 F.3d at 1067 (impairment of breeding is “harm” under the ESA); *Forest Conservation Council*, 50 F.3d at 788 (“Habitat modifications that significantly impair a protected species' essential behavioral patterns are explicitly proscribed by the Secretary's redefinition of ‘harm’”); *Palila v. Hawaii Dep't of Land & Nat. Res.*, 852 F.2d 1106, 1108 (9th Cir. 1988) (“harm includes not only direct physical injury, but also injury caused by impairment of essential behavior patterns via habitat modification”); *Defenders of Wildlife*, 204 F.3d at 925 (“habitat modification that is reasonably certain to injure an endangered species *by impairing their essential behavioral patterns* satisfie[s] the actual injury requirement and [is] sufficient to justify a permanent injunction”) (emphasis added); *Babbitt v. Sweet Home*, 515 U.S. at 709-10 (O'Connor, J., concurring) (discussing impaired breeding as an “injury” under the ESA, explaining “I do not find it as easy as [the dissent] does to dismiss the notion that significant impairment of breeding injures living creatures”).



A narrow interpretation of “harm,” to include only death or actual physical injury, is belied by the fact that the ESA’s definition of “take” already includes “killing” and “wounding.” 16 U.S.C. § 1532(19) (defining “take”). As the Supreme Court explained in support of a broader and more inclusive interpretation, “[u]nless ‘harm’ encompasses indirect as well as direct injuries, the word has no meaning that does not duplicate that of other words that [the ESA] uses to define ‘take’). *Babbitt v. Sweet Home*, 515 U.S. at 687. “The statutory context of ‘harm’ suggests that Congress meant that term to serve a particular function in the ESA, consistent with, but distinct from, the functions of the other verbs used to define ‘take.’” *Id.* at 702; *see also id.* at 704 (“‘Take’ is defined ... in the broadest possible manner to include every conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife”).

In addition, the Ninth Circuit has explained, “[i]t is clearly conceivable that one can inflict great harm on a protected species by creating an imminent threat of harm to that species. Such a threat therefore falls easily within the broad scope of Congress’ definition of ‘take.’” *Forest Conservation Council*, 50 F.3d at 784. Thus, “an imminent threat of future harm is sufficient for the issuance of an injunction under the ESA.” *Marbled Murrelet v. Babbitt*, 83 F.3d at 1064.

## **2. Harassment**

“Harass” within the ESA’s definition of “take” is defined even more broadly than harm, and includes any “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. While harm is defined as “an act which actually kills or injures wildlife,” *id.*, harass is defined more expansively as “an intentional or negligent act or omission which creates the

likelihood of injury to wildlife.” *Id.* While harm requires the significant “impairment” of “essential” behavioral patterns, harass requires only the significant “disruption” of “normal” behavioral patterns. *Id.* Thus, a significant “disruption” of behavioral patterns constitutes take, even if those behavioral patterns are not fully “impaired,” and such behavioral patterns need not be “essential,” but only “normal.” *Id.*

This broad definition reflects Congress’s intent to define take “in the broadest possible manner to include every conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife.” *Babbitt v. Sweet Home*, 515 U.S. at 704 (*quoting* S. Rep. No. 93-307, p. 7 (1973)). As the Supreme Court explained in *Babbitt*, the broad definition of harassment would, for example, “prohibit the activities of birdwatchers where the effect of those activities might disturb the birds and make it difficult for them to hatch or raise their young.” *Id.* at 704-05 (*quoting* H.R.Rep. No. 93-412, p. 15 (1973)).

The Eighth Circuit’s recent decision in *Kuehl v. Sellner*, 887 F.3d 845 (8th Cir. 2018) illustrates the wide breadth of the prohibition against harassing protected species. *Kuehl* involved a licensed zoo, which had a permit to keep endangered lemurs and tigers, but which was still prohibited by the ESA from engaging in harm or harassment. *Id.* Noting that lemurs have a “much greater sensitivity to olfactory stimuli” than humans, and finding that “the presence of feces and cobwebs ... interferes with the lemurs’ olfactory senses,” *Id.* at 849, the court found that the defendants’ failure to reduce odors by properly cleaning the lemurs’ living areas constituted “harassment” under the ESA. *Id.* at 853; *see also id.* at 853-54 (finding the same harassment due to odors and unsanitary conditions in the tiger area). Similarly noting that lemurs are a “very social species,” and that social isolation leads to “elevated noradrenaline levels,” *Id.* at 849, the Court separately found that social isolation and lack of environmental

enrichment "significantly disrupts the lemurs' normal behavioral patterns and, therefore, constitutes 'harassment' and 'taking' within the meaning of the Endangered Species Act." *Id.* at 852-53.

### **3. Plaintiffs' Burden of Proof**

In this case, Plaintiffs must prove "take" of marbled murrelets by a preponderance of the evidence. *Defenders of Wildlife*, 204 F.3d at 925 (stating that the "preponderance of the evidence" standard applies in Section 9 cases); *Marbled Murrelet*, 880 F. Supp. at 1360 (applying the "preponderance of the evidence" standard). Under this standard, Plaintiffs must prove that take is "more likely than not." *Sanchez v. Monumental Life Ins. Co.*, 102 F.3d 398, 404 (9th Cir. 1996) (generally describing the "preponderance of the evidence" standard); *see also Nat'l Wildlife Fed'n v. Burlington N.R.R., Inc.*, 23 F.3d 1508, 1512 (9th Cir. 1994) ("While we do not require that future harm [to a listed species] be shown with certainty before an injunction may issue, we do require that a future injury be sufficiently *likely*") (emphasis in original); 50 C.F.R. § 17.3 (defining "harass" under the ESA to include "an intentional or negligent act or omission which creates the *likelihood* of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns") (emphasis added).

In several cases, the Ninth Circuit has stated that a "reasonably certain threat of imminent harm to a protected species is sufficient for issuance of an injunction under section 9 of the ESA." *Marbled Murrelet v. Babbitt*, 83 F.3d at 1066; *Forest Conservation Council*, 50 F.3d at 788; *Defenders of Wildlife*, 204 F.3d at 925. Defendants may argue that this "reasonable certainty" standard creates a higher burden of proof than the conventional "preponderance of the evidence" standard, but this is not true. In *Marbled Murrelet v. Babbitt*, the Ninth Circuit specifically explained that the plaintiffs had shown a "reasonable certainty of imminent harm,"

warranting a permanent injunction against logging in occupied marbled murrelet habitat, based on evidence that murrelets were *probably* nesting in the area and that the proposed logging would *likely* harm murrelets by impairing their breeding and by increasing the likelihood of predation. 83 F.3d at 1067–68. In that case, the defendants planned to partially log 137 acres within a continuous 440-acre block of murrelet nesting habitat called the Owl Creek parcel. In a section titled “sufficiency of the evidence of future harm,” the Ninth Circuit stated, in full:

Evidence was presented in the district court that there were “approximately 100 detections of marbled murrelets at Owl Creek, throughout the birds' breeding season, for a period of three consecutive years,” including many instances of “occupied behavior.” Evidence of occupied nesting behavior was also provided by the PSG Protocol. In addition, several experts testified to the *probability* of the murrelets' nesting in Owl Creek, and that implementation of Pacific Lumber's harvesting plan would *likely* harm marbled murrelets by impairing their breeding and increasing the likelihood of attack by predators on the adult murrelets as well as the young.

We conclude there was sufficient evidence to support the district court's findings. The district court did not clearly err in finding marbled murrelets were nesting in Owl Creek and that there was a reasonable certainty of imminent harm to them from Pacific Lumber's intended logging operation.

*Id.* (emphasis added).

Defendants may cite *Arizona Cattle Growers' Ass'n v. U.S. Fish & Wildlife, Bureau of Land Mgmt.*, 273 F.3d 1229, 1243 (9th Cir. 2001), to argue that proving “take” requires Plaintiffs to meet a heightened burden of proof. This argument is incorrect for several reasons. First, *Arizona Cattle Growers* addresses the burden of proof that federal agencies have in issuing incidental take permits under Sections 7 and 10 of the ESA, and the standards for federal agencies under Sections 7 and 10 are different than the standards for Plaintiffs in this Section 9 case. Second, even if that case provides guidance here, the court in *Arizona Cattle Growers* specifically explained that “reasonable certainty” of take is “a more lenient standard than if the record were required to include evidence of an actual taking.” *Id.* at 1243. While the court

reasonably rejected the argument that “take” is sufficiently proven whenever there is a mere “possibility, no matter how small, that a listed species will be taken,” *id.* at 1240-41, it also specifically described the agency’s burden of proving take as “a very low bar to meet.” *Id.* at 1244.

In accordance with this “very low bar,” the court in *Arizona Cattle Growers* found that “take” had not been sufficiently proven in several instances where there was *no evidence* that the species at issue existed in the vicinity of the challenged action, and where the potential for harm to the species was therefore entirely speculative. *Id.* at 1243-48. Where listed species were found to be present, however, the court in *Arizona Cattle Growers* found that take had been sufficiently proven. *Id.* at 1248 (“Unlike the other allotments in question, the Fish and Wildlife Service provided evidence that the listed species exist on the land in question and that the cattle have access to the endangered species’ habitat. Accordingly, the Fish and Wildlife Service could reasonably conclude that the loach minnow could be harmed when the livestock entered the river”); *see also Ctr. for Biological Diversity v. Salazar*, 695 F.3d 893, 910 (9th Cir. 2012) (distinguishing *Arizona Cattle Growers* because “[h]ere, threatened polar bears are present in the Chukchi Sea area, and the oil and gas exploration activities are reasonably certain to result in at least some nonlethal harassment”); *see also* Defendants’ Ex. 198 at 4 (Department of Interior Guidance Memorandum, describing *Arizona Cattle Growers* as requiring “evidence that a take would *likely* occur”) (emphasis added).

When deciding whether a plaintiff has met its burden of proving take, courts should give substantial weight to evidence that take has been caused by similar actions in the past. *Nat’l Wildlife Fed’n v. Burlington N. R.R.*, 23 F.3d 1508, 1512 (9th Cir. 1994) (“Past takings are indeed instructive, especially if there is evidence that future similar takings are *likely*”) (emphasis

added); *Defenders of Wildlife v. Martin*, 454 F. Supp. 2d 1085, 1098 (E.D. Wash. 2006) (“When considering the possibility of a violation, evidence of past takings is instructive to the Court, particularly if there is evidence that future similar takings are *likely*”) (emphasis added).

#### **4. Prior Cases Involving “Take” of Marbled Murrelets from Logging in Occupied Habitat**

This is not the first time a court has been asked to determine whether logging in suitable murrelet habitat that is classified as “occupied” under the PSG Protocol causes harm and harassment of marbled murrelets under Section 9 of the ESA. The facts and legal issues presented in this case are nearly identical to those in *Marbled Murrelet*, 880 F. Supp. at 1343. There, a non-profit environmental organization challenged a logging company’s plan to partially<sup>3</sup> log 137 acres within a larger 440-acre stand of continuous suitable murrelet habitat in northern California called the “Owl Creek” parcel. *Id.* at 1344-45. Surveys were conducted under the PSG Protocol and resulted in “approximately 100 detections of marbled murrelets at Owl Creek,” including sub-canopy “occupancy” detections. *Id.* at 1350-53 (describing the PSG Protocol), 1361 (describing a total of “approximately 100 detections” including sub-canopy detections).

In concluding that the entire parcel was occupied by marbled murrelets, the court specifically relied on the PSG Protocol. *Id.* at 1360. The court explained, “[u]nder the PSG Protocol, the test for determining whether a stand of potential habitat is ‘occupied’ is simple: if a surveyor detects marbled murrelets during a survey visit *and* observes ‘occupied behavior,’ the entire stand is classified as ‘occupied.’” *Id.* The court adopted the PSG Protocol’s finding that

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<sup>3</sup> Unlike the clearcut proposed in the current case, the logging proposal in *Marbled Murrelet* would have left 40-60 percent of the trees standing within the 137-acre logging unit. 880 F. Supp. at 1366.

“[o]bservations of ‘occupied behavior’ indicate that marbled murrelets are probably using a stand for nesting purposes,” and it explained further:

Because marbled murrelets are so difficult to detect, and because studies have shown that “occupied behavior” is associated with probable nesting, a single observation of “occupied behavior” under the PSG Protocol is enough to classify a suitable stand of marbled murrelet habitat as being “occupied.” *Thus, even if only one instance of “occupied behavior” is noted during 300 surveys, a forest will be considered a probable marbled murrelet nest stand.*

*Id.* at 1353-53 (emphasis added) (internal citations omitted).

Having found, by a preponderance of evidence, that the forest was occupied by marbled murrelets, *id.* at 1360, the court then found that the proposed partial cut in occupied habitat would “harm” marbled murrelets because it “will significantly impair the marbled murrelets’ breeding behavior and decrease the chances of successful nesting,” “will likely cause returning marbled murrelets to become disoriented and significantly decrease the likelihood that they will be able to successfully nest and raise their young to fledgling,” and “will increase the likelihood of avian predation upon the remaining marbled murrelets who achieve nesting, their eggs, and their young.” *Id.* at 1366. The court found that “removing more than half of the trees in the 137-acre harvest area will result in the loss of a substantial portion of the nesting opportunities for marbled murrelets returning to the harvest area,” and that “the harvest of any one part of the stand will degrade the suitability of the entire stand as nesting habitat for marbled murrelets.” *Id.*

The Ninth Circuit upheld this decision in *Marbled Murrelet v. Babbitt*, 83 F.3d at 1067-68, affirming that “habitat modification which significantly impairs the breeding and sheltering of a protected species amounts to ‘harm’ under the ESA.” The Court held that plaintiffs had properly carried their burden of proof when they established a “probability of the murrelets’ nesting at Owl Creek,” and that logging activities “would likely harm marbled murrelets by

impairing their breeding and increasing the likelihood of attack by predators on the adult murrelets as well as the young.” *Id.*

More recently, the Plaintiffs in this case sued various Oregon officials, claiming that logging in occupied murrelet habitat on state lands violated Section 9 of the ESA. *Cascadia Wildlands v. Kitzhaber*, No. 3:12-cv-00961-AA. The claims raised by Plaintiffs in that case, and the scientific principles supporting those claims, are identical those in the current litigation. *Compare* Dkt. Nos. 1 and 2-1 (complaint and memorandum in support of motion for preliminary injunction in the present case) *with Cascadia Wildlands v. Kitzhaber*, No. 3:12-cv-00961-AA, Dkt. Nos. 1 and 22 (complaint and memorandum in support of motion for preliminary injunction in the previous case).

*Cascadia Wildlands v. Kitzhaber* was dismissed before a final decision on merits, but the dismissal resulted from the State defendants’ decision to permanently cancel all of its pending or proposed logging operations in occupied murrelet sites in all State Forests, and to adopted formal policies to ensure that the size and scope of “occupied” murrelet sites would be determined by the PSG Protocol. *Id.* (Dkt. No. 111) at 2 (“State Defendants have cancelled, terminated, or withdrawn approval, as applicable, of all named timber sale areas about which Plaintiffs complain, as well as sale areas with similar characteristics”); *id.* at 7 (“Current policies are aligned with the PSG Protocol in the designation of occupied habitat”). The State of Oregon then sold the Benson Ridge parcel to Defendants, Ex. 19, and the present case was filed because Defendants are now planning to do *precisely* what the State of Oregon conceded it could not.

#### **B. The Benson Snake Logging Operation will “Harm” and “Harass” Marbled Murrelets**

The evidence presented in this case will be very similar to that presented in *Marbled Murrelet*, 880 F. Supp. at 1343. Like the 440-acre Owl Creek parcel at issue there, the 268-acre



Benson South Survey Area is continuous suitable marbled murrelet habitat. Proposed Pretrial Order, Dkt. No. 89 at 16 (stipulating that the Benson South Survey Area is contiguous suitable murrelet habitat). Like in *Marbled Murrelet*, surveys at Benson Ridge were conducted over three seasons and resulted in a significant number of detections, including at least 25 sub-canopy detections. The scientific evidence supporting Plaintiffs' claims has only grown stronger since *Marbled Murrelet* was decided.

The evidence presented in this case will prove that the Benson Snake logging operation will significantly impair marbled murrelets' breeding in at least three distinct but related ways, including (1) by removing trees likely used by murrelets for nesting, (2) by removing a large area of habitat that is important for pair bonding, socializing, and other essential breeding behaviors, and (3) by shrinking and degrading the quality of murrelet habitat in the remaining patches and thereby increasing the risk of predation, decreasing nesting opportunities and nesting success, and impairing murrelets' essential behavioral patterns.

First, the evidence from CRFW of at least one sub-canopy detection within the now-proposed logging unit shows a sufficient likelihood that murrelets are using the logging unit for nesting, and the removal of this habitat will prevent murrelets from nesting within the logging unit for 100 years or more. This is not a case that involves a modest change in the suitability of habitat for marbled murrelets, but rather a complete and effectively permanent destruction of that habitat. There is no evidence that murrelets nest in or otherwise utilize clearcuts or young tree farms for any purpose. *Compare with United States v. W. Coast Forest Res. Ltd. P'ship*, No. CIV. 96-1575-HO, 2000 WL 298707, at \*5 (D. Or. Mar. 13, 2000) (logging 94 acres within a 3,602-acre spotted owl home range did not cause "take" of spotted owls because the logging unit was a mile from the nest, was only used by the owls for foraging, and would continue to be

suitable foraging habitat after the logging occurred). There is also no evidence that murrelets pack into remaining habitat when occupied habitat and nest sites are lost. Instead, to the contrary, the evidence will show a direct correlation between the availability of suitable nesting habitat and marbled murrelet populations, and that removal of habitat that is occupied by murrelets will significantly impair murrelet breeding and sheltering.

Second, the results of surveys by CRFW and WEST show that the Benson South Survey Area, including the logging unit, is used for nesting and other essential breeding-related activities. The PSG Protocol defines an occupied site as the entire contiguous stand, explaining, “[o]ccupied sites include nest sites, but an occupied site also can be used for purposes other than nesting that are essential for the complete life history of the bird.” *Ex. 11* at 27. For example, “the places where birds engage in courtship or other breeding-related activities might not be in the exact same area or stand as a nest, *but these areas are just as important as nesting sites for the birds’ life history.*” *Id.* at 27-28 (emphasis added); *see also Nw. Forest Res. Council*, 97 F.3d at 1169 (“occupied sites” under the PSG Protocol are a reasonable surrogate for “nesting” sites, in part because “nesting” encompasses a “range of activity” that is not confined to the precise location of the nest tree). Section 9 does not just prohibit the removal of nests, but rather the significant impairment of breeding, sheltering, or other essential behavioral patterns. 50 C.F.R. § 17.3; *Marbled Murrelet*, 83 F.3d at 1067 (“a habitat modification which significantly impairs the breeding and sheltering of a protected species amounts to ‘harm’ under the ESA”). The proposed logging will cause take by destroying 49 acres of habitat that is “essential for the complete life history of the bird,” even absent evidence of the specific location of a nest tree.

Third, even if the Court dismisses CRFW’s survey results and determines that the proposed logging unit does not contain a nest, and even if the Court rejects the PSG Protocol

outright and refuses to apply “occupied” status to the entire contiguous stand, the evidence will *still* show that the proposed logging will take murrelets by fragmenting the landscape and degrading the quality of habitat for the birds nesting in remaining forest patches. The evidence will show that “[m]urrelet habitat use during the breeding season is *positively associated* with the presence and abundance of mature and old-growth forests, *large core areas of old- growth, low amounts of edge habitat, reduced habitat fragmentation*, proximity to the marine environment, and forests that are increasing in stand age and height.” Ex. 13 at 70. The USFWS has explained:

In addition to direct habitat removal, forest management practices can fragment murrelet habitat; this reduces the amount and heterogeneous nature of the habitat, reduces the forest patch sizes, reduces the amount of interior or core habitat, increases the amount of forest edge, isolates remaining habitat patches, and creates “sink” habitats. ... [T]he ecological consequences of these habitat changes to murrelets can include effects on population viability and size, local or regional extinctions, displacement, fewer nesting attempts, failure to breed, reduced fecundity, reduced nest abundance, lower nest success, increased predation and parasitism rates, crowding in remaining patches, and reductions in adult survival.

Ex. 13 at 33. Defendants’ own survey data shows significant amount of murrelet activity in the areas immediately adjacent to the proposed logging unit. Defendants’ own experts have concluded that the Benson West Survey Site and the Benson Southeast Survey Site (which are both part of the single contiguous Benson South Survey Area) are used by murrelets for nesting. Proposed Pretrial Order, Dkt. No. 89 at 21. Even if the trees are left standing in these portions of the stand, a new 50-acre clearcut in the middle of the stand will significantly degrade the remaining habitat and thereby increase the risk of predation, decrease nesting opportunities and nesting success, and impair murrelets’ essential behavioral patterns.

Logging in occupied murrelet habitat impairs murrelets’ breeding in a variety of ways, including by directly removing habitat that is used by murrelets for breeding purposes (including

nesting, courtship, and social behaviors), fragmenting and degrading suitability of the remaining habitat, increasing the risk of predation on adult murrelets, chicks, and eggs, increasing the risk of wind disturbance on nests, and changing microclimates within the stand by increasing temperatures, reducing moisture, and thereby impacting the moss and epiphyte growth that murrelets depend upon for nesting. Through their experts, and consistent with a large body of scientific literature, Plaintiffs will show that these habitat changes will lead to displacement of nesting murrelets, fewer nesting attempts, failure to breed, reduced fecundity, reduced nest abundance, lower nest success, increased predation rates, crowding in remaining patches, and/or reductions in adult survival.

Defendants will likely attack Plaintiffs' case by isolating each possible cause of harm to murrelets and arguing that each cause, standing alone, cannot be proven with sufficient certainty. Defendants may argue, for example, that evidence of increased wind along new edges or changes in microclimate, when considered in isolation, are not sufficient to prove that a particular nest will fail as a result of the new clearcut. Defendants will also likely argue that the increased risk of predation cannot be specifically quantified, and that this evidence, by itself, cannot therefore prove a "reasonable certainty" of "actual death or injury."

The various ways that murrelets will be injured in this case, however, should not be considered in isolation, nor must each piece of evidence prove Plaintiffs' case in full. Plaintiffs have not alleged that increased wind along new edges, by itself, will cause a particular nest to fail. Rather, it is *Defendants' logging*, and the combined and interrelated environmental effects of that logging, that will harm, harass, or otherwise take marbled murrelets that nest in the area. Indeed, it is the existence of such a variety and multitude of environmental impacts that lend credence to Plaintiffs' claim that the impairment of murrelet breeding in this case will be both

“significant” and “reasonably certain” to occur. Thus, the Court must look to the effects of Defendants’ conduct *as a whole* when determining whether Plaintiffs have met their burden of proof. *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 886 F.3d 803, 819 (9th Cir. 2018) (harm should be judged by the impacts of a challenged action “as a whole” instead of by any one component of the action); *Sierra Club v. Lyng*, 694 F. Supp. 1260, 1272 (E.D. Tex. 1988) (Finding “take” under the ESA when the defendant’s practices and policies, “when taken as a whole,” detrimentally impacted listed woodpeckers); *see also Marbled Murrelet v. Babbitt*, 83 F.3d at 1068 (looking generally to the impacts “from Pacific Lumber’s intended logging operation” to determine whether there was a reasonable certainty of imminent harm).

Defendants may also argue that there is already a naturally high rate of nest failure among murrelets, and that Plaintiffs cannot succeed in this case unless they prove that a particular incident of predation or nest failure will be caused specifically and solely by the new clearcut. This line of argument was recently rejected by the Ninth Circuit in *Nat’l Wildlife Fed’n.*, 886 F.3d at 819, which held that, to obtain an injunction under the ESA, “a plaintiff need not... show that the action sought to be enjoined is the exclusive cause of the injury.” (*quoting M.R. v. Dreyfus*, 697 F.3d 706, 728 (9th Cir. 2012)). The Court in *Nat’l Wildlife Fed’n* upheld an injunction even though “[i]rreparable harm [to the species] may be caused by activities broader than those that plaintiffs seek to enjoin.” *Id.* The Court explained that “[l]isted species are exposed to the combined operations of the entire system” and that “as a practical matter,” the effects on listed species from the challenged activity “cannot be cleanly divorced from the effects” of the system as a whole. *Id.* at 820. The Court ultimately concluded that the district court was not required to find that an incident of harm was caused solely by the challenged activity. *Id.*

Furthermore, the Ninth Circuit has held that “harm” under the ESA includes the *impairment* of breeding, the *increased risk* of predation, and the creation of an *imminent threat* of harm. *Marbled Murrelet v. Babbitt*, 83 F.3d at 1067-68 (plaintiffs met their burden of proving take by showing that logging “would likely harm marbled murrelets by *impairing* their breeding and *increasing the likelihood* of attack by predators on the adult murrelets as well as the young”) (emphasis added); *Forest Conservation Council*, 50 F.3d at 784 (“the ESA’s language, purpose, and structure authorize citizens to seek an injunction against an *imminent threat* of harm to a protected species”) (emphasis added). Thus, Plaintiffs need not prove that a particular incident of predation will certainly result from the challenged activity. Evidence that Defendants’ logging will *increase the likelihood* of predation is sufficient. *Id.*; 50 C.F.R. § 17.3 (“harm” and “harassment” both include significant *impairment* of behavioral patterns). If anything, the high rate of predation that naturally exists makes the impact of *any* further increase in that risk all the more significant.

Defendants will likely ask this Court to impose a highly unreasonable and entirely impracticable burden of proof. It is worth reiterating that the court in *Marbled Murrelet v. Babbitt* never required the plaintiffs to quantify the precise increase in predation risk or prove with certainty that a particular incident of predation will be attributable solely to the challenged logging activity. Rather, the court found that logging would likely harm murrelets by “*impairing* their breeding and *increasing the likelihood* of attack by predators on the adult murrelets as well as the young.” 83 F.3d at 1067-68. Likewise, the court in *Arizona Cattle Growers*, did not require the USFWS to prove the precise odds that a particular cow would step on a particular fish within a specified period of time. Rather, where USFWS showed that cows and endangered fish were located in the same area, it was reasonable to “conclude that the loach minnow could be

harm when the livestock entered the river.” *Arizona Cattle Growers*, 273 F.3d at 1248. As the Supreme Court explained in *Babbitt v. Sweet Home*, the broad definition of take would prohibit even “the activities of birdwatchers where the effect of those activities *might disturb the birds and make it difficult* for them to hatch or raise their young.” 515 U.S. at 704-05 (*quoting* H.R.Rep. No. 93–412, p. 15 (1973)) (emphasis added).<sup>4</sup>

Finally, the evidence of “take” that Plaintiffs will present in this case is significantly bolstered by the fact that logging, and the resulting loss and degradation of nesting habitat, is both widely known to be the primary cause of murrelets’ threatened status and has already been found to cause “take” of murrelets. *Nat’l Wildlife Fed’n.*, 23 F.3d at 1512 (“Past takings are indeed instructive, especially if there is evidence that future similar takings are likely”); Ex. 16 at 3 (“The principal factor affecting the marbled murrelet in [Oregon, Washington, and California], and the main cause of population decline has been the loss of older forests and associated nest sites”); *Marbled Murrelet v. Babbitt*, 83 F.3d at 1067-68 (finding that logging in an occupied murrelet site causes take).

In summary, Plaintiffs will prove at trial that Defendants’ proposed clearcut in the middle of occupied, contiguous murrelet habitat will cause unlawful take.

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<sup>4</sup> See also *Defenders of Wildlife v. Martin*, 454 F. Supp. 2d 1085, 1098 (E.D. Wash. 2006) (Snowmobiling in an area occupied by endangered caribou causes harm and harassment by “displac[ing] caribou to less preferred habitat,” and by “potentially increase[ing] predation rates by creating easier access to caribou habitat for its natural predators”); *Greenpeace v. Nat’l Marine Fisheries Serv.*, 106 F. Supp. 2d 1066 (W.D. Wash. 2000) (finding that Alaskan fisheries’ operations may constitute taking of the Steller sea lion where fisheries are catching fish normally eaten by the sea lion); *Bensman v. United States Forest Service*, 984 F. Supp. 1242 (W.D. Mo. 1997) (holding that removal of dead trees used by the Indiana bat for habitat and hibernation may constitute taking).

### C. Plaintiffs' *Daubert* Motions

The Court should exclude and/or strike Defendants' expert witnesses Drs. Strickland, Starceovich, and Marzluff pursuant to Fed. R. Evid. 702 and *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 597 (1993). This *Daubert* motion is contained within Plaintiffs' trial brief pursuant to the Court's order, Dkt. No. 69. Because this case is being tried to the Court, the Parties and Court have agreed to consolidate the hearing on *Daubert* motions with the trial and, consistent with this agreement, Plaintiffs do not anticipate or request a pretrial ruling on this motion.

Fed. R. Evid. 702 states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

In *Daubert*, the Supreme Court directed trial courts to perform a "gatekeeping" function to ensure that expert testimony conforms to Rule 702's admissibility requirements. The Court noted that trial courts maintain "broad discretion in determining the admissibility of evidence and considerable leeway in determining the reliability of particular expert testimony." District Courts engage in a two-part test when evaluating whether an expert's testimony is admissible: First, courts determine whether the witness "is qualified as an expert by knowledge skill, experience, training, or education." *Daubert*, 509 U.S. at 583. This first step mandates that an expert witness may not testify "outside of his area of demonstrated experience." *Tubar v. Clift*, 2009 WL 1325952, at \*8 (W.D. Wash. May 12, 2009) (citing *United States v. Hankey*, 203 F.3d 1160, 1168 (9th Cir. 2000) (an expert must possess "appropriate qualifications – *i.e.*, some special knowledge, skill, experience, training or education *on that subject matter*")) (emphasis



added in *Tubar*) (citing Fed. R. Evid. 702)).

Second, courts evaluate whether the proffered testimony is both relevant and reliable. Courts generally look to four non-exclusive factors in assessing relevancy and reliability: (1) whether a theory or technique has been tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential error rate and the existence and maintenance of standards controlling the theory or technique's operation; and (4) the extent to which a known technique or theory has gained general acceptance within a relevant scientific community. *Id.* at 593-94. These factors are not to be applied as a "definitive checklist or test," but rather as guideposts which "may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert's particular expertise, and the subject of his testimony." *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 150 (1999). The ultimate objective is to "make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Id.* at 152.

"The proponent of expert testimony must establish the admissibility of expert testimony by a preponderance of the evidence." *Luttrell v. Novartis Pharm. Corp.*, 894 F. Supp. 2d 1324, 1332 (E.D. Wash. 2012) (citing *Henricksen v. ConocoPhillips Co.*, 605 F. Supp. 2d 1142, 1154 (E.D. Wash. 2009)).

# **1. The Court Should Exclude Dr. Strickland's Testimony**

First, the Court should exclude Dr. Strickland's testimony because it is "outside of his area of demonstrated experience." Dr. Strickland is a Principal Ecologist at WEST and has experience with wildlife study design. Plaintiffs do not question Dr. Strickland's expertise in that regard; his CV speaks for itself. However, Dr. Strickland has absolutely no background with

marbled murrelets and he formulated his opinions about the PSG Protocol specifically for this litigation. In deposition, Dr. Strickland admitted:

- 1) He has not completed any scientific or field work related to the marbled murrelet in his career, including murrelet ecology and biology. Fourth Declaration of Daniel R. Kruse, Ex. 1 (“Strickland Tr.”) at 9:1-7; 11:7-11.
- 2) This case is the first time he has personally worked on any issues related to the marbled murrelet. *Id.*, 9:8-12.
- 3) He did not “attempt to become an expert in marbled murrelets” for this case, instead relying on materials provided to him by Defendants’ counsel. *Id.*, 11:12-24.
- 4) He does not hold himself out as an expert in the marbled murrelet. *Id.*, 11:25-12:4.
- 5) While he considers himself a “third-party reviewer” of the study effort completed by WEST, he recognizes that he is “not truly an independent third party because I work for the company that did some of the work.” *Id.*, 12:24-13:11.
- 6) He merely stepped into the case to provide some of the expertise that Defendants’ prior expert, Dr. Courtney, was allegedly going to proffer. *Id.*, 13:18-25.
- 7) He has never been to the Benson Ridge site. *Id.*, 17:8-114.

These seven facts should compel the Court to exclude Dr. Strickland’s testimony. Dr. Strickland knows nothing about marbled murrelets. He has never studied them, written about them, researched them, or designed a wildlife study to investigate them. He readily admits he is not an expert on marbled murrelets, only stepping into this case because Defendants’ prior expert was withdrawn. *Lust v. Merrell Dow Pharmaceuticals, Inc.*, 89 F.3d 594, 597 (9th Cir. 1996) (a “very significant factor” is whether an expert witness developed opinions “expressly for the purposes of testifying”) (*quoting Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311,

1317 (9th Cir. 1995)). His testimony is therefore “outside of his expertise,” and the Court should exclude Dr. Strickland at the first step of *Daubert*.

Were the Court to look further, it would find that Dr. Strickland should also be excluded because his testimony fails to employ “the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” Dr. Strickland’s overall opinion is that the PSG Protocol does represent a true scientific study and is laden with policy judgments not grounded in the scientific method. But Dr. Strickland testified that:

- 1) The PSG Protocol “is written in such a way that the – the behavioral ecology of the marbled murrelet is very important in implementing the protocol[.]” Strickland Tr. 33:20-34:6.
- 2) That designing wildlife studies requires the scientist to know about the ecology and biology of the species being studied. *Id.*, 29:25-30:24.
- 3) That there is a “debate” about the marbled murrelet’s behavioral ecology, based on a declaration submitted by Defendants’ withdrawn expert, Dr. Courtney, and based on a single paper he read. *Id.*, 60:23-61:22.
- 4) He did not review any of the dozens of scientific articles and reports supporting the assumptions of the PSG Protocol in the Protocol’s reference section which discuss, *inter alia*, the marbled murrelets’ ecology, despite acknowledging that “this literature [forms] the basis of the assumptions in the PSG.” *Id.*, 63:4-22; 72:20-73:12.
- 5) He believes the PSG Protocol’s recommendations on extrapolating occupancy of survey sites to a survey area was based on feelings by the Pacific Seabird Group that “they felt that was what was best for the conservation of the marbled murrelet, and some or all of that literature may have influenced them.” Dr. Strickland admitted he

did not investigate this with the Pacific Seabird Group, did not call anyone in the Group, and that his sole basis for rendering this opinion was merely “opinion...based on my experience.” *Id.*, 69:6-70:16.

- 6) That he believes the “hypothesis” that “continuous habitat is important” for marbled murrelets is untested, yet failed to review any of the scientific articles in the PSG Protocol discussing just that, and failed to do any independent research beyond what Defendants’ other experts state. *Id.*, 79:7-80:9.
- 7) In issuing his rebuttal, he failed to review any of the literature cited in Plaintiffs’ expert, Dr. Golightly’s report. *Id.*, 138:8-11.

In his ordinary work, Dr. Strickland admits that learning about the biology and ecology of a specific species is a critical component of designing a study to investigate that species. But here, Dr. Strickland never once undertook to understand the biology and ecology of the marbled murrelet. Dr. Strickland readily admits that the PSG Protocol’s assumptions about the extent of occupancy rest of the behavioral ecology of the marbled murrelet, but in the same breath opines that those assumptions are not “scientific.” The only basis for that opinion is Dr. Strickland’s bare speculation about what the Pacific Seabird Group was thinking in 2003 when they wrote the PSG Protocol – another topic that he himself failed to investigate. Indeed, that Dr. Strickland failed to read *any* of the scientific articles *specifically referenced* in the PSG Protocol as supporting the assumptions therein renders his opinion inadmissible under Fed. R. Evid. 702, because an opinion based on insufficient facts is incomplete and unreliable. *See Murray v. Hmshost Corp.*, No. 07-CV-2056, 2009 WL 702095, at \*2 (S.D. Cal. Mar. 16, 2009). That this error was repeated by Dr. Strickland in rebutting Plaintiffs’ experts further erodes any reliability in his opinions. The Court should therefore exclude his testimony.

## 2. The Court Should Exclude Dr. Starcevich's Testimony

Dr. Starcevich is a consulting statistician at WEST and is one of Defendants' testifying experts. Dr. Starcevich's opinions in this case concern the statistical basis for the PSG Protocol and how it is similar or dissimilar to statistical occupancy modeling. Fourth Declaration of Daniel R. Kruse, Ex. 2 ("Starcevich Tr.") at 5:16-20. Dr. Starcevich acknowledges that she is "not an expert in marbled murrelets," has no academic background in marbled murrelets, and that this case was the very first time she was asked to work with marbled murrelets specifically. *Id.*, 13:20-14:10. While she has never worked with the PSG Protocol before, *id.* 25:16-20, one of Dr. Starcevich's key opinions is that, under the Protocol, there is no "quantitative" or "statistical" basis for extrapolating survey-site level occupancy to the entire survey area. Instead, as Dr. Starcevich readily admits, the basis for that extrapolation in the PSG Protocol rests on biological factors unique to the marbled murrelet, a topic which she has absolutely no background and no expertise. *Id.* 23:8-24:14.

More troubling, Dr. Starcevich testified that, in her normal course, she "generally work[s] very closely with biologists" to ask about "the pertinent details of the biology as its related to selecting model covariates knowing that I'm modeling the outcomes appropriately." *Id.* 32:15-33:10. However, in this case, Dr. Starcevich did not work with any marbled murrelet biologist before rendering her opinions on the PSG Protocol, because she was only asked to look "at the design" of the Protocol. *Id.* 33:11-34:20.

Finally, Dr. Starcevich critiques the PSG Protocol on the basis that it is not consistent with what Dr. Starcevich contends is "standard occupancy modeling." That term, according to Dr. Starcevich, refers to a 2006 paper by another statistician, Dr. MacKenzie. However, Dr. Starcevich admits that Dr. MacKenzie's 2006 paper is only "standard" based on her own

perceptions, not on any article, journal, or similar academic publication. *Id.* 59:17-61:22.

Moreover, the “standard occupancy modeling” that Dr. Starceovich basis her critique on *post-dates* the 2003 PSG Protocol by three years, making her opinion subjective and speculative.

Dr. Starceovich faults the PSG Protocol on a statistical basis, but ignores the numerous biological factors unique to marbled murrelets that the Protocol specifically references when making its assumptions and recommendations. These are the same biological factors she would try to understand in the normal course of her work, but completely ignored here. Additionally, Dr. Starceovich’s contention about the consistency of the PSG Protocol with “standard occupancy modeling” is unreliable, as the “standard” Dr. Starceovich references post-dates the PSG Protocol by three years. The Court should therefore exclude her testimony.

### **3. The Court Should Exclude Dr. Marzluff’s Testimony**

Defendants have proffered the testimony of Dr. John Marzluff to counter Plaintiffs’ argument that Benson Snake logging operation will increase the risk of predation on marbled murrelets. Specifically, Defendants will call Dr. Marzluff to testify that the increased risk of predation to murrelets following logging is caused by an increased abundance of predators, especially jays, and that the increased abundance of jays following a clearcut is caused by the propagation of new food sources such as berry-producing shrubs in the newly cleared area. Dr. Marzluff acknowledges that, “[i]f unmitigated, harvesting timber from the planning area in the southwest portion of the Benson Ridge Tract is likely to increase the abundance of nest predators and the risk of predation on murrelet nests throughout the Benson Ridge Tract.” Dkt. No. 26-3 (Marzluff Decl.) at 10. However, Dr. Marzluff is expected to testify that applying chemical herbicides to the newly clearcut area to prevent growth of any new berries or shrubs will reduce or eliminate the increase in the local jay population that would otherwise be expected to occur.

This testimony, and Defendants’ mitigation efforts, are subject to a parallel motion *in limine* filed herewith.

The scientific basis for Dr. Marzluff’s opinion about the effectiveness of herbicides at mitigating predation risks is an unpublished grant report written by Dr. Marzluff and nine other coauthors in 1999 concerning an ongoing (unfinished) multi-year study. Ex. 123; Fourth Declaration of Daniel R. Kruse, Ex. 3 (“Marzluff Tr.”) at 103:12-25. The objective of that study was “determining a mechanistic understanding of how forest stand and landscape composition and structure affect predator abundance and predation rates on murrelet nests.” Ex. 123 at 11. It was not to test the hypothesis that routine herbicide treatments will reduce corvid predation of murrelets. Indeed, the word “herbicide” only appears *one time* in the 72-page, single-spaced document.

Furthermore, the “annual report” was never published nor subject to any type of peer review. *Id.*, Marzluff Tr. 103:12-104:23. It describes only “preliminary results,” Ex. 123 at 5, and it specifically states the need for continued research, *id.* at 63-65, which never happened. Instead, the study was abandoned by its authors and graduate student, never being completed. Marzluff Tr. 105:2-8. Dr. Marzluff did not recall whether he shared this report with any regulatory agencies, but does know that he has never received any type of formal response from a regulatory agency about this work. *Id.*, 112:9-23.

*Daubert* requires that an expert’s opinion be reliable. Here, Dr. Marzluff’s primary opinion is based on a hypothesis that has never been tested under the scientific method; instead, it is based on a passing observation contained within a 72-page report focusing on how “forest stand and landscape composition and structure affect predator abundance and predation rates on murrelet nests.” That report has never been published or tested by peer review. There are no

known error rates concerning Dr. Marzluff's opinion, because it has never been tested or studied, either by other scientists or by any regulatory agency. *See id.*, 108:9-17 (Dr. Marzluff can only reference a master's thesis conducted on Vancouver Island as investigating predation rates where berries were not present, but he did not "know if it was because of herbicides"). Further, the application of herbicides as a means of reducing predation of marbled murrelets is not a known technique or theory that has gained any acceptance among marbled murrelet researchers or regulatory agencies. *Id.*, 107:9-108:2 (Dr. Marzluff does not know why his hypothesis concerning herbicide applications has not been mentioned in publications concerning the effects of fragmentation on murrelets). Based on the four *Daubert* factors, the Court should exclude Dr. Marzluff's testimony as unreliable under Fed. R. Evid. 702.

**D. The PSG Protocol, which Classifies the Benson South Survey Area as "Occupied" by Marbled Murrelets, is Reliable Scientific Evidence under *Daubert***

One of the central issues in this case is whether the area impacted by Defendants' proposed clearcut is occupied by marbled murrelets. Under the PSG Protocol, the surveys conducted by either CRFW or WEST are sufficient to establish that the entire Benson South Survey Area is occupied. This is because the Benson South Survey Area is, as Defendants admit, continuous suitable habitat, and because both CRFW and WEST documented sub-canopy behaviors within that continuous stand. Defendants will likely argue that the PSG protocol is not valid scientific evidence under *Daubert* and that, as a result, there is insufficient evidence to classify the Benson South Survey Area as occupied. For the reasons discussed below, Defendants are wrong.



# **1. Prior Cases have Found the PSG Protocol to be Valid Scientific Evidence**

The validity of the PSG Protocol has been addressed directly in at least two prior cases. *Marbled Murrelet*, 880 F. Supp. at 1351; *Nw. Forest Res. Council*, 97 F.3d at 1167. As discussed above, *Marbled Murrelet*, involved a claim that logging in occupied marbled murrelet habitat would harm and harass murrelets by impairing their breeding. In determining whether the area in question was in fact occupied by murrelets, the court relied on the PSG Protocol and specifically found that the Protocol was valid scientific evidence under *Daubert*:

The PSG Protocol is the generally accepted scientific methodology employed to determine whether marbled murrelets are located in, or making use of, a particular inland forested site for nesting purposes. The PSG Protocol has been adopted for use by the United States Forest Service, the United States Bureau of Land Management, and the state fish and wildlife agencies of Washington, Oregon and California. In addition, on March 5, 1992, the California Board of Forestry adopted the PSG Protocol for use by CDF and DFG to determine whether a proposed timber harvest plan will result in a “take” of a marbled murrelet where there is evidence of an active marbled murrelet site in or adjacent to the THP area, or where there is evidence of a potential impact to a marbled murrelet from the proposed logging operations. According to Ken Moore (“Moore”), a wildlife biologist with the California DFG, the DFG believes that the PSG Protocol “is the best thing out there that anybody has been able to produce that will give the highest probability to find marbled murrelets in any given inland site.” Given the PSG Protocol’s nearly universal acceptance by the scientific community and public agencies charged with enforcing the ESA, the court finds that the PSG Protocol fulfills the requirements set forth by the Supreme Court in *Daubert*.

*Marbled Murrelet*, 880 F. Supp. at 1351 (internal citations omitted). The Ninth Circuit upheld the court’s decision in *Marbled Murrelet* without addressing the defendants’ *Daubert* challenge to the PSG Protocol. *Marbled Murrelet v. Babbitt*, 83 F.3d at 1066-67.

The Ninth Circuit, however, specifically addressed the validity of the PSG Protocol in *Nw. Forest Res. Council*, 97 F.3d at 1167. In that case, a congressionally approved appropriations rider required the Forest Service and Bureau of Land Management (“BLM”) to award certain timber sale contracts, except “if any threatened or endangered bird species is

known to be nesting within the acreage that is the subject of the sale unit.” *Id.* at 1165 (*quoting* Pub. L. No. 104–19, § 2001(k), 109 Stat. 194, 240–47). Describing the PSG Protocol as “the only prudent means to determine the presence of nesting murrelets,” and the “best available scientific information upon which to base a determination of whether murrelets were known to nesting in a sale unit,” both the Forest Service and BLM applied the standards of PSG Protocol to determine where murrelets were “known to be nesting.” *Id.* at 1168-69. Scott Timber Company challenged the use of the PSG Protocol arguing, just as they do here, that the designation of an “occupied site” under the PSG Protocol does not sufficiently establish the location of actual murrelet nests. *Id.*

Rejecting Scott Timber Company’s arguments, the Ninth Circuit found that “nesting” encompasses a “range of activity” that is not limited to the precise location of the nest tree. *Id.* at 1169. The Court explained, “[f]or the past five years, the FS, the FWS and independent scientists have accepted the ‘occupancy’ determination under the PSG protocol as the criterion for establishing nesting use of forested stands” and “[a]ccording to the agencies’ experts, there is no other reliable scientifically accepted and tested method for identifying nest stands.” *Id.* at 1169. The Court continued:

Agency experts have concluded that, with respect to marbled murrelets, “nesting” is “completely synonymous” with a finding that a sale unit is occupied. The PSG protocol was not adopted by the agencies as a formal regulation pursuant to the Administrative Procedure Act. However, the agencies had been applying the PSG protocol at least from the time marbled murrelets were listed in 1992. Their biologists had participated in the development of the protocol, and the record supports the conclusion that the agencies had endorsed and applied the protocol to nesting determinations.

*Id.*; *see also id.* at 1167 (describing the PSG Protocol as “the generally accepted scientific methodology employed to determine whether marbled murrelets are located in, or making use of, a particular inland forested site for nesting purposes”). The Court ultimately concluded that the

“use of an ‘occupancy’ determination under the PSG protocol is a reasonable interpretation of the statute's requirement that threatened or endangered birds are ‘known to be nesting’ within the boundaries of a sale unit.” *Id.* at 1169.

**2. The PSG Protocol Continues to be Widely Accepted in the Scientific Community and Used by Public Agencies, Researchers, and Academics.**

In *Marbled Murrelet v. Pac. Lumber Co.*, the court found the PSG Protocol to be scientifically valid under *Daubert* based entirely on the protocols “nearly universal acceptance by the scientific community and public agencies charged with enforcing the ESA.” 880 F. Supp. at 1351; *Daubert*, 509 U.S. at 594 (“Widespread acceptance can be an important factor in ruling particular evidence admissible”). Though it has been twenty years since *Marbled Murrelet* and *Nw. Forest Res. Council* were decided, the PSG Protocol continues to be the only accepted method for conducting surveys and designating occupied habitat, including among state and federal agencies.

In Washington State, for example, the PSG Protocol is officially adopted by administrative rule. WAC 222-12-090(14)<sup>5</sup> is titled “Survey protocol for marbled murrelets” and states

The Pacific Seabird Group survey protocol dated January 6, 2003, and formally titled *Methods for Surveying Marbled Murrelets in Forests: A Revised Protocol for Land Management and Research*, shall be used when surveying for marbled murrelets in a stand. Surveys are valid if they were conducted in compliance with the board-recognized Pacific Seabird Group survey protocols in effect at the beginning of the season in which the surveys were conducted.

Mirroring the PSG protocol, Washington’s administrative rules define “occupied marbled murrelet site” as “[a] contiguous area of suitable marbled murrelet habitat where at least one of

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<sup>5</sup> Relevant excerpts from Washington’s Administrative Rules are provided in the Fourth Declaration of Daniel R. Kruse, Ex. 4.

the following marbled murrelet behaviors or conditions occur: (a) A nest is located; or (b) Downy chicks or eggs or egg shells are found; or (c) Marbled murrelets are detected flying below, through, into or out of the forest canopy; or (d) Birds calling from a stationary location within the area; or (e) Birds circling above a timber stand within one tree height of the top of the canopy...” WAC 222-16-010(1) (defining “occupied marbled murrelet site”) (compare with Ex. 11 (PSG Protocol) at 27). In fact, Washington requires that an occupied site include all contiguous suitable habitat within 1.5 miles of the observed “occupied” behaviors, which is far more expansive and protective than the PSG protocol. WAC 222-16-010 (defining “occupied marbled murrelet site”).

The State of Oregon’s Forests Division has also adopted formal policies that require murrelet surveys and the designation of occupied murrelet habitat on state lands to comply with the PSG Protocol. Fourth Declaration of Daniel R. Kruse, Ex. 5 (Oregon State Forests Division Murrelet Policies). These policies were submitted to this Court by the State of Oregon in the previous litigation. *Cascadia Wildlands v. Kitzhaber*, No. 3:12-cv-00961-AA (Dkt. No. 114). The policies outline how surveys are laid out and conducted, all in accordance with the PSG Protocol. Fourth Kruse Decl., Ex. 5 at § 2.6 (“Conducting Surveys”). In accordance with the PSG Protocol, the policies define occupied habitat as “all contiguous potentially suitable habitat in a survey area if a subcanopy detection indicative of occupancy is observed in any site within that survey area, unless, after review, the USFWS agrees that a different extent or configuration, or both, appropriately designates the occupied habitat.” *Id.* at § 6.5. Unless approved by the USFWS, logging in an occupied murrelet site is strictly prohibited, and clearcutting is further prohibited within 100 meters of the boundaries of an occupied site. *Id.* at § 2.19 (prohibiting

logging within occupied sites); *Id.* at § 2.22 (prohibiting clearcutting within the buffer of an occupied site); *Id.* at § 6.2 (defining “buffer” as 100 meters around each occupied site).

When the State of Oregon provided these policies to the Court in the previous litigation, it specifically stated, “Current policies are aligned with the PSG Protocol in the designation of occupied habitat.” *Cascadia Wildlands v. Kitzhaber*, No. 3:12-cv-00961-AA (Dkt. No. 111 at 7); *see also id.* at 14 (“the current policies’ definition of ‘occupied’ corresponds to the PSG Protocol’s definition—on which Plaintiffs rely—by requiring all contiguous suitable habitat within a survey area be designated as occupied”).

The PSG Protocol has also been officially adopted by the U.S. Forest Service. Fourth Declaration of Daniel R. Kruse, Ex. 6 (excerpts from the Northwest Forest Plan); *see also* 16 U.S.C. § 1604(i) (requiring compliance with adopted forest plans). While the Northwest Forest Plan does not refer to the PSG protocol by name (the protocol has since been revised and renamed), it does describe the Protocol’s 2-year survey effort, it classifies an occupied site based on the observation of one or more of the Protocol’s “occupied” behaviors (including sub-canopy flights), and it specifically requires the occupied site to include all contiguous habitat. *Id.* The Forest Service has very recently reaffirmed that the current PSG protocol is “[t]he protocol used to determine site occupancy.” Ex. 15 (USDA 2018), page 73 (citing Evans Mack et al. 2003); *see also id.* at 43 (“the NWFP requires murrelet surveys to be conducted before harvest on any other federal lands in the murrelet’s range. If a survey shows likely nesting, then all contiguous existing and recruitment habitat (defined as stands that could become nesting habitat within 25 years) within a 0.5-mi (0.8 km) radius is protected”).

The USFWS has also specifically used and relied on the PSG Protocol, and it has emphasized the importance, and scientific validity, of using observations of sub-canopy

behaviors as a method for classifying a given site as occupied, even when the location of a nest is unknown:

It is difficult to locate individual nests for a species that may only show activity near its nest one time per day, and may do so under low light conditions. Therefore, *occupied sites or suitable habitat become the most important parameters to consider when evaluating its status*. Active nests, egg shell fragments or young found on the forest floor, *birds seen flying through the forest beneath the canopy*, birds seen landing, or birds heard tailing from a stationary perch *are all strong indicators of occupied habitat*.

Ex. 16 at 2 (emphasis added).

In 2016, the USFWS published a formal decision regarding the designation of critical habitat for marbled murrelets, and it was required to use the “best scientific and commercial data available” to, among other things, define the “geographic area occupied by the species.” Ex. 18 (81 Fed. Reg. 51348) at 10-11. Referring repeatedly to the PSG Protocol by name (Evans Mack et al. 2003), the USFWS stated, “we have determined that the information used in this document is the best scientific data available.” *Id.* at 11. The formal 2016 USFWS decision states:

The following types of data are indicative of the marbled murrelet’s use of forested areas for nesting and will be relied upon to make the determination of whether we have documentation of nesting behavior by critical habitat subunit:

(a) *Data indicative of nesting behavior*. A subunit with any of the following data will be considered to have a documented detection of nesting behavior. We consider one detection in a subunit sufficient to support a positive nesting behavior determination for the entire subunit.

(1) Audiovisual surveys conducted according to the Pacific Seabird Group (PSG) survey protocol (Evans Mack *et al.* 2003 or earlier versions). Detection types that are indicative of nesting include: sub-canopy behaviors (such as flying through the canopy or landing),

(2) Nest locations obtained through radio-telemetry tracking, tree climbing, eggshell fragments, and chicks on the ground.

(b) *Contiguity of forested areas within which nesting behaviors have been observed*. According to the PSG protocol (Evans Mack *et al.* 2003), a contiguously forested area with detections indicative of nesting behavior is deemed to be used by nesting marbled

murrelets throughout its entirety. Therefore, any subunits where there were no detections of behaviors indicative of nesting or possibly no surveys, but the forested areas in the subunit are contiguous with forested areas extending outside of the subunit within which there are documented nesting behaviors, will be deemed to be positive in terms of a nesting behavior detection.

*Id.*

Plaintiffs will also offer the testimony of Dr. Gary Falxa, who worked for the USFWS for more than 20 years and was directly involved in the agency's research and regulatory work on marbled murrelets for 18 of those years. Dr. Falxa will testify about the USFWS's and the State of California's use of and reliance on the PSG protocol. Dr. Falxa's testimony will be consistent with his expert report, which states:

[The] PSG Protocol is the generally accepted scientific methodology employed to determine whether marbled murrelets are located in, or making use of, a particular inland forested site for nesting purposes. It has been widely used for this purpose by regulatory agencies and researchers from academia and government agencies, and is the only science-based survey protocol for this purpose that I am aware of. I say this based on my 18 years of working with marbled murrelets, both as a scientist and in a regulatory role in the US Fish and Wildlife Service Endangered Species Program. I have used the results of PSG Protocol surveys extensively for modeling murrelet nesting habitat suitability (Raphael et al. 2011, Falxa and Raphael 2015, Raphael et al. 2015) and in my work with the Northwest Forest Plan Marbled Murrelet Effectiveness Monitoring Program. I also worked with and relied on PSG Protocol survey results in my regulatory work at the U.S. Fish and Wildlife Service.

Plaintiffs' Ex. 4 at 9-10. In addition, Plaintiffs will offer the testimony of Dr. Richard Golightly, who has studied marbled murrelets for more than 20 years, and who will testify that the PSG protocol continues to be the widely used and accepted method for determining whether a particular forest stand is occupied by murrelets.

Defendants' own expert witness, Dr. John Marzluff, testified in his deposition that when he has conducted surveys for marbled murrelets, he has used the PSG Protocol. Marzluff Tr. at 12. When asked whether he has used any method other than the PSG Protocol "to determine whether a particular area is occupied or used by marbled murrelets for nesting," Dr. Marzluff

said, “no.” *Id.* at 13. In addition, Dr. Marzluff testified that some of his published literature has relied on studies that used the PSG Protocol to determine whether a particular area was used by marbled murrelets for nesting, and he considers the information obtained in PSG Protocol surveys to be reliable enough to include in the literature he has published. *Id.*

Furthermore, Defendants’ arguments against the PSG Protocol are undermined by the fact that when they retained WEST to survey for marbled murrelets in the Benson Ridge area, WEST conducted surveys *according to the PSG Protocol*. Mr. Troy Rintz, who was the survey team leader and who has been worked as a wildlife biologist for 24 years, testified:

Mr. Kruse: You said that [WEST’s] surveys were conducted pursuant to the PSG Protocol?

Mr. Rintz: Correct.

Mr. Kruse: Have you been involved with marbled murrelet surveys that employed a method other than the PSG Protocol?

Mr. Rintz: No.

Mr. Kruse: To your knowledge, based on your experience in the field of wildlife biology over, it sounds like 20-plus years, is the PSG Protocol generally the accepted method for conducting inland forest surveys for marbled murrelets?

Mr. Rintz: Yes.

Mr. Kruse: And to your view, are there better or other ways that this should be done?

Mr. Rintz: No.

Fourth Declaration of Daniel Kruse, Ex 7 (“Rintz Tr.”).

At trial, the evidence will show that the PSG Protocol is *the* method for conducting inland surveys for murrelets and for designating occupied habitat. The Court should use and accept the PSG Protocol as valid and reliable scientific evidence.



#### IV. RELIEF

The Court has authority under the ESA to grant injunctive relief. 16 U.S.C. § 1540(g)(1)(a); *see also Defenders of Wildlife v. Bernal*, 204 F.3d at 925 (if a violation of Section 9 is sufficiently proven, “an injunction would be appropriate relief”). If Plaintiffs prevail, the Court also has authority under the ESA to award Plaintiffs their reasonable costs and fees, including attorneys’ fees and expert witness fees. 16 U.S.C. § 1540(g)(4).

#### V. CONCLUSION

For all of these reasons, and based on the evidence presented at trial, Plaintiffs respectfully request (1) a declaratory order finding Defendants in violation of Section 9 of the ESA, (2) injunctive relief prohibiting Defendants from implementing the Benson Snake logging operation, and (3) an award of their reasonable costs and fees, including attorneys’ fees and expert witnesses’ fees.

Dated this 27th day of July, 2018.

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### **CERTIFICATE OF SERVICE**

I hereby certify that on July 27, 2018 I served the foregoing **Plaintiffs' Trial Brief** on Defendants' counsel by email at [dcarollo@yockimlaw.com](mailto:dcarollo@yockimlaw.com).

Dated this 27st day of July, 2018.

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